PRODUCT CATALOGUE

COOLANT AUDIT

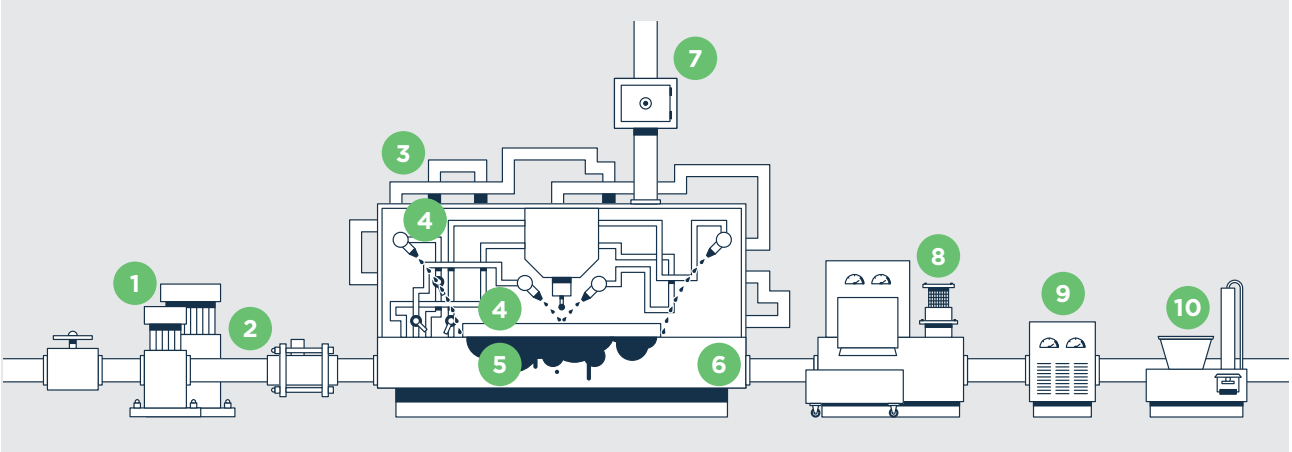
of Machine Tools and Lubricoolant Units

Efficient coolant systems.

grindaix

COOLANT AUDIT

Overview of Services



We audit and evaluate wastage of your:

1. Pumps
2. Valves
3. Piping
4. Nozzles
5. Lubricoolants
6. Machine bed flushing systems
7. Lubricoolant/air extraction systems
8. Filtration plants
9. Lubricoolant cooling units
10. Disposal units (chip compression, vaporisation, chip conveyors,...)

ADDITIONAL SERVICES

+ Consumption optimization
+ Machine retrofitting
+ Unit supply
+ CO_2 balance
+ TCO calculation
+ Investment benchmark
+ Product suitability analysis

ANALYSIS

You could call it “analysis for significantly reducing overall lubricoolant requirements”. Or simply “Coolant Audit”.

YOUR BENEFITS:

+ Clear annual savings per machine
+ Reduction in overall lubricoolant requirements
+ Optimum feed to machining sites
+ No waste in auxiliary consumers
+ Needs-based pump selection possible
+ More robust and smaller lubricoolant systems
+ Only as much lubricoolant consumption as necessary
+ No unnecessary losses
+ ROI < 4 months incl. follow-up investments

At grindaix we have found a way to prevent wastage of lubricoolants in existing and planned production systems in metal processing, namely the grindaix audits!

By "auditing" we mean the measurement, recording, analysis and evaluation of lubricoolant systems (piping, valves, fixtures, branch ducts, throttles, all nozzle types) with respect to the extent of their wastage. To do that, our experienced engineers and technicians visit you in your production envi ronment and check machine tools for all production processes as well as all types of lubricoolant treatment systems, including peripheral pipe systems, in the briefest possible time. Naturally, we bring the highly specialized equipment required for the audits along with us.

The result is impressive. You find out precisely how much lubricoolant is exiting at which points in your production system as well as when and at what speed and volume this is occurring. You also receive detailed information on oversupply, undersupply or waste. Naturally, we also recommend remedial measures which can be implemented directly!

AUDIT TYPES

Coolant Audit **S**

First aid fast! The Coolant Audit S provides an initial and immediate way of determining lubricoolant oversupply and undersupply of a machining site (all production processes). Flow rates and supply pressures are measured on a machine tool for a selected production scenario and the geometries of the process-relevant lubricoolant supply nozzles are recorded. One particular advantage of the Coolant Audit S is that the assessment results are available within the space of a day.

THE AUDIT RESULT

We record your machining task on site and generate comprehensive documentation of the supply per nozzle to the machining site. Furthermore, we provide information on any undersupply or oversupply of the area analyzed.

Coolant Audit **M**

With the Coolant Audit M nothing escapes us. We carry out a complete analysis of a production machine. All supply lines, fixtures, piping as well as all lubricoolant exiting within the machine is analyzed in detail and checked for relevance with respect to waste. We would be happy to assist you when it comes to new machine developments. Or if you intend to procure new machines, we will audit the planned machines prior to purchase to check their lubricoolant-related operating costs.

THE AUDIT RESULT

We completely log all machine lubricoolant periphery data and record all possible production scenarios. From this, we determine the technical savings potential and performance-related characteristic curves, among other things.

Coolant Audit **L**

Get to know your production line like never before. The Coolant Audit L provides a complete analysis of a production line. On every machine all supply lines, fixtures and piping as well as lubricoolant exiting within the machine is analyzed in detail. The relevance thereof is checked with respect to waste. In addition, the lubricoolant circuitry of the machines is analyzed. We also audit planned machines prior to purchase to check for waste and suitability.

THE AUDIT RESULT

We completely log all machine lubricoolant periphery data and use this to determine technical savings potential and related implementation measures as well as lubricoolant needs when using a central facility.

Coolant Audit **F**

Here the focus is on the filtration of lubricoolants. During Coolant Audit F we carry out an analysis and evaluation of a lubricoolant filtration facility. We look into the suitability of the facility for your lubricoolant environment and also monitor your requirements with respect to the production process and lubricoolant discharge. From this, we determine how much lubricoolant is required for which process (machine tools) and work together with you and your supplier to design your lubricoolant filtration systems based on needs, ensuring that they are not unnecessarily over-dimensioned.

THE AUDIT RESULT

The Coolant Audit F provides a number of different results, from a statement about the facility dimensions, the benefits and drawbacks of various types of filtration and specific lubricoolant features to investment benchmarking.

AUDIT-PROCEDURE

Procedure for a Coolant Audit

1 VISIT TO YOUR PRODUCTION SITE

Our technicians visit you with all the necessary measurement equipment. Within a very short space of time (approx. 3h/machine), the periphery inside the machine is recorded.

2 MEASUREMENT OF FLOW RATES

By means of state-of-the-art measurement technology, we check the current lubricoolant flow rate per line. Depending on the audit, we also monitor all scenarios of your production process.

3 RECORDING ALL COMPONENTS

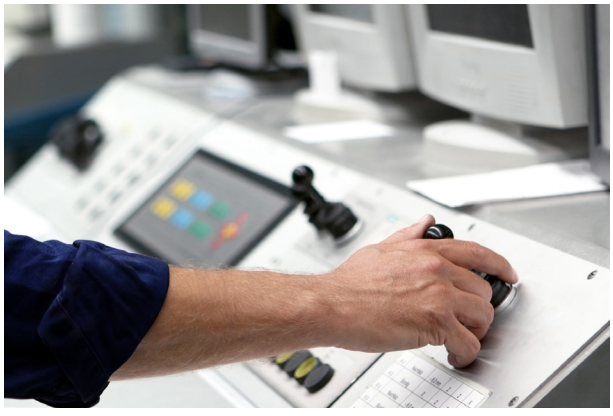
All pipes are completely recorded – from the lubricoolant supply connection to all nozzle exits. All geometrical and type values are also logged.

4 EVALUATION OF WASTE

We demonstrate how machining sites may be supplied in a robust way to meet the highest productivity demands, and how all waste in secondary zones may be avoided.

Examples of Savings

Unit	Lubricoolant [l/min]
Schaudt CF41	- 125
Mikrosa Kronos L	- 280
Landis LT 1	- 97
Blohm Profimat	- 86
ABA SLM V2 4002	- 148
Diskus DDW	- 245
...	



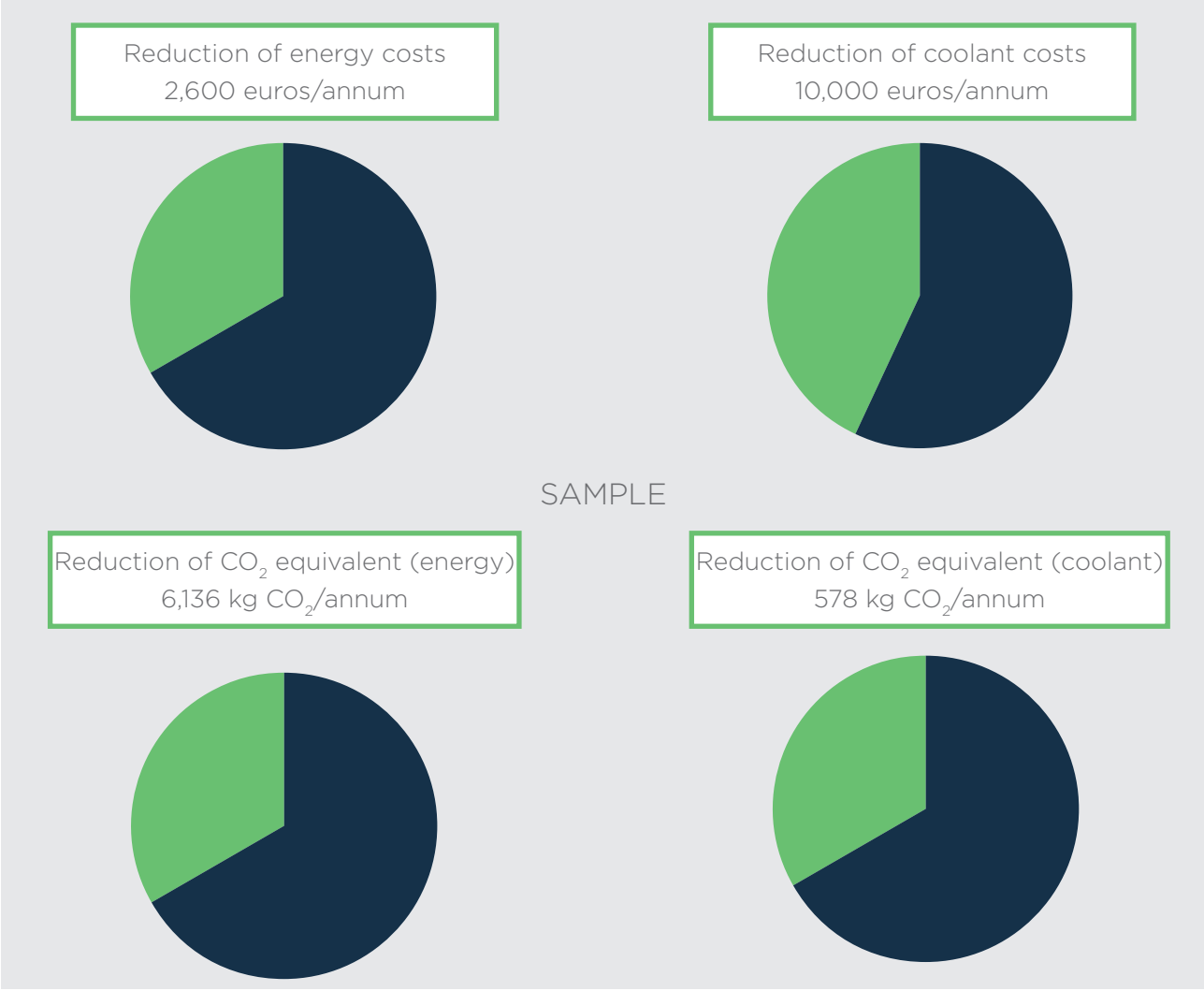
IMPROVE YOUR CO_2 BALANCE

How much potential does your production system hold?

By carrying out a complete analysis of current consumption data of lubricoolant systems, we not only provide information on the CO_2 equivalent of your production unit but also reveal **savings potential when it comes to energy and CO_2 emissions**.

Avoid purchasing costly additional **CO_2 emission rights** and reduce your emissions by avoiding waste.

Upon request, we will prepare your **CO_2 emission data for your production unit** in a matter of days.



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